

GRAPTOLITES OF VICTORIA: A LOWER
ORDOVICIAN MONOGRAPTUS FROM BENDIGO.

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(Plate XVII.)

A specimen, unique to Victoria, has been found at Bendigo by Mr. Frank Chambers, of the Geological Survey. It occurs on a slab of soft blue shale and consists of a flat spiral polypary with the family characters of the Monograptidae. The associated graptolites are *Tetragraptus fruticosus* (3 br.) J. Hall, very common and well preserved, and several other species common to Zone B2. The horizon is, therefore, Lower Ordovician, Bendigo Series. It is remarkable that a Monograptid should now be found in such an association for the first time at Bendigo where intensive collecting has been in progress for thirty years and tens of thousands of identifications have been made.

The family Monograptidae, erected by Lapworth (4) in 1873, comprises unilateral Graptolitoidea, with a polypary simple or compound, straight or curved, with thecae varied in form, growing upward in a single linear series along the line of the virgula. It embraces the genus *Monograptus* erected by Geinitz (3) in 1852 and characterized by a simple polypary, with thecae consisting of cylindrical, conical or somewhat flattened tubes, in contact, overlapping, or becoming more or less isolate, with straight or curved walls and apertural margins variable in form, plain or ornamented. In the majority of species the polypary is distinctly curved (see Elles and Wood, 2), and in a few the curvature is excessive and continuous, the polypary being coiled into a plain spiral (*M. convolutus*) or a conical helix (*M. turriculatus*).

In the Bendigo specimen, the polypary is not well preserved. Only the portion which has been laterally compressed shows indistinctly the character of the thecae; the rest has been compressed along the dorsal margin, which probably accounts for the varying width of the polypary. The sicula is hidden from view by an overlying graptolite, *T. fruticosus* J. Hall. The flat spiral polypary and thecae growing upwards in a single linear series leave no other alternative than to place

it among the Monograptidae. The polypary is robust. Near its proximal end it is 1.0 mm. wide, at its distal extremity 2.0 mm.; both measurements of dorsally compressed portions of the polypary. Thecae on convex margin, are straight, circular tubes of small diameter, overlapping a small fraction of their length, with even apertural margins; 5 or 6 in 10 mm. On the proximal thecae, thick blunt spines originate from the outer lip; on more distal thecae the spines become thinner and longer; and on the most distal thecae, no spines are visible, but they may have been obscured by the mode of compression. There is some evidence of a virgula.

The straight, circular, scarcely-overlapping thecae suggest that it is a primitive type, one that shows "simplification in branching, and change in direction of growth..." (1) characteristic of Silurian species occurred very early in the evolution of the Monograptidae.

The specimen was found in Tucker Gully, Bendigo, bearing N 39° 10' E, 27.75 chains from the True Blue shaft; Reg. No. 14050, National Museum collection.

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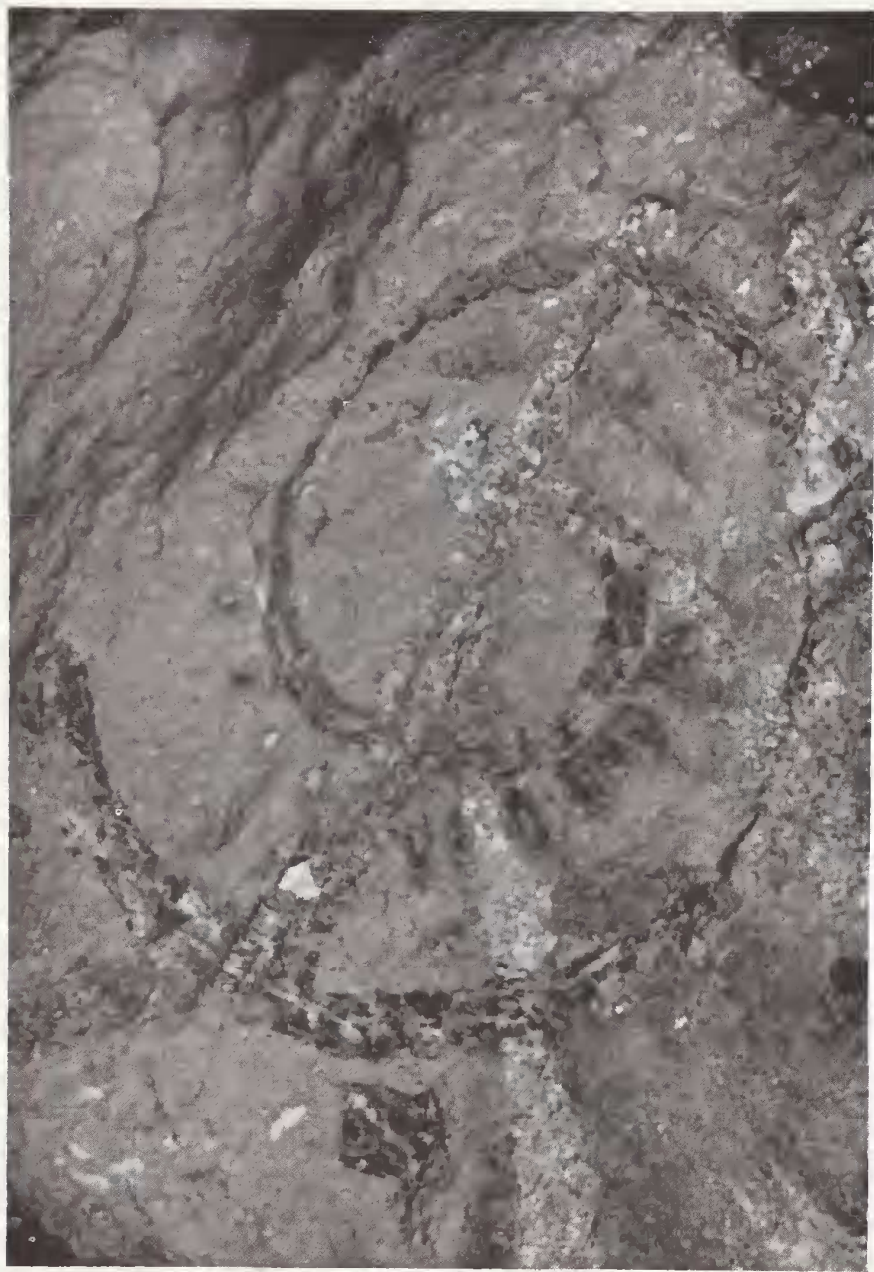
3. Die Graptolithen, 1852.

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4. Notes on the British Graptolites and Their Allies. Geol. Mag., Dec. 1, Vol. x, Table i, 1873.

DESCRIPTION OF PLATE XVII.

Monograptus sp. Polypary, No. 14050, Nat. Mus. Coll., from the Lower Ordovician Beds, Zone B2, Bendigo. × 6 approx.



Monograptus sp.
× 6 approx.